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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,411	05/11/2005	Michio Tsuyumoto	3273-0202PUS1	4477

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EXAMINER

DESAI, ANISH P

ART UNIT	PAPER NUMBER
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1771

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/13/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/13/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/534,411

Applicant(s)

TSUYUMOTO ET AL.

Examiner

Anish Desai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The applicant's arguments in response to the Office action dated 09/08/06 have been fully considered.

1. Claims 1-5 are pending. Claims 1-3 are withdrawn. Support for newly amended claims 4 and 5 is found in the specification.
2. 112 rejections are withdrawn in view of the present amendment and response (pages 1-14 of 12/08/06 amendment).
3. 102/103-type rejections over Derwent abstract of JP 48-097774 are withdrawn in view of the present amendment and response (see pages 2-3 of 12/08/06 amendment). JP 48-097774 does not teach film-forming polymers as claimed.
4. 103-type rejections of Roy (US 3,929,971) in view of Kamide et al. (US 3,883,626) are withdrawn in view of the present amendment and response (see pages 2-3 of 12/08/06 amendment). Neither Roy nor Kamide teach film-forming polymers as claimed.
5. A new ground of rejection is made in view of Shigeru et al. (JP 2002-086476).

Claim Objections

6. Claims 4 and 5 are objected to because of the following informalities: the claim language of "average rate of surface hole area" is ambiguous and confusing because ordinarily the term "rate" is associated with "quantity X per time". Thus, the use of term "average **rate** of surface hold area" is ambiguous and confusing. For purpose of the examination the aforementioned language is interpreted as porosity.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 4 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by Shigeru et al. (JP 2002-086476) (Machine translation provided by the examiner).

Regarding claim 4, the ratio of A/B is in the range of 0.3 to 3 and the ratio of C/D is in the range of 0.1 to 1.5 includes 1. Thus, any reference disclosing a **homogeneous** membrane wherein an average pore size of A of 0.01 to 10 μm will read on claim 4. Similarly, regarding claim 5, the ratio of A^1/A^2 of 0.3 to 3 incorporates 1 and the ratio of C^1/C^2 of 0.7 to 1.5 incorporates 1. Thus, any reference disclosing a homogeneous membrane wherein an average pore size of 0.01 to 10 μm and average porosity of 48% will read on the claimed ratio of A^1/A^2 and C^1/C^2 .

Shigeru teaches a method and apparatus for forming a porous film. The porous film of Shigeru has homogeneous characteristics with respect to film thickness, pore size, voids, and pore shapes (abstract and 0041). According to Shigeru a porous membrane, which consists of polyimide precursor obtained in this invention is used as a polyimide precursor membrane (0031), which reads on a polymer component forming the film comprises at least one selected from a group of imide polymers as claimed. Additionally, the polyimide membrane of Shigeru has a thickness of 30 μm (0045). Further, Shigeru teaches that the porous membrane had a void content of 15 to 85% and average aperture (pore size) of 0.01 to 10 μm and the porous membrane with homogeneous porosity, aperture, and a void content makes it very useful in various

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applications (0041). With respect to claims 4 and 5, this, disclosure of Shigeru reads on average surface pore size A of 0.01 to 10 μm (claim 4), average rate of surface hole area (porosity) C, average pore size B, and average rate of inside hole area (porosity) D. Additionally, since the membrane of Shigeru has homogeneous properties of pore diameter and void content (porosity), it meets the limitation of ratio of A/B in the range of 0.3 to 3 and ratio of C/D in the range of 0.7 to 1.5. Similarly, regarding claim 5 as previously noted, the porous membrane of Shigeru is homogeneous with respect to pore size and porosity wherein the membrane has pore size of 0.01 to 10 μm and porosity of from 15 to 85%. Thus, the disclosure of Shigeru anticipates claims 4 and 5.

Response to Arguments

8. Applicant's arguments with respect to claims 4 and 5 have been considered but are moot in view of the new ground(s) of rejection.

Aligabek M. D. B.
[Signature]

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

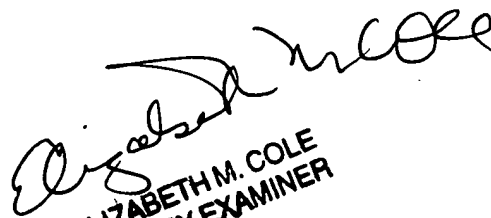
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anish Desai whose telephone number is 571-272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

APD


ELIZABETH M. COLE
PRIMARY EXAMINER